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### REMARKS

It is noted that the claim amendments herein are intended solely to more particularly point out the present invention for the Examiner, and not for distinguishing over the prior art or the statutory requirements directed to patentability. That is, the Examiner has maintained the rejection currently of record because he considers that the language "without sharing any of the subject's biometric data" is unclear. Although Applicants disagree with the Examiner's view, the independent claims have been amended in an attempt to clarify the language for the Examiner's benefit, to expedite prosecution.

It is further noted that, notwithstanding any claim amendments made herein, Applicant's intent is to encompass equivalents of all claim elements, even if amended herein or later during prosecution.

Claims 1-49 are all of the claims pending in the present Application. Claim 49 is allowed. Claims 1-3, 5, 6, 14, 20, 24-27, 30, 31, 35, 37, 39-45, 47, and 48 stand rejected under 35 USC §102(e) as anticipated by US Patent 6,219,439 to Burger. Claims 1, 2, 4, 14, 19-23, 28, 29, 35-44, 46, and 48 stand rejected under 35 USC §102(e) as anticipated by US Patent 6,038,315 to Strait, et al.

Applicants gratefully acknowledge the Examiner's indication that claims 7-13, 15-18, and 32-34 would be allowable if rewritten in independent format. However, Applicants believe that the independent claims, once properly understood, are currently allowable over the prior art of record and, therefore, respectfully declines to rewrite these claims in independent format at this time.

These rejections identified above are respectfully traversed in view of the following discussion.

### I. THE CLAIMED INVENTION

As described and claimed, for example by claim 1, the present invention is directed to a method of authenticating a subject, including using one or a plurality of biometric measurements for authentication without any sharing of the subject's biometric data. That is, none of the subject's biometric data is accessible in any form to any external device or party.

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That is, unlike conventional systems, the present invention provides a technique in which the subject's biometric data is not exported from the device that stores the biometric data for the authentication process, since the device itself includes the comparison calculator.

A key advantage of the present invention is that the subject can be authenticated without an invasion of privacy (e.g., without sharing the biometric data with an external comparison device).

The prior art of record fails to teach or suggest this capability (or structure) of preventing an invasion of privacy.

## II. THE PRIOR ART REJECTION

The Examiner alleges that US Patent 6,219,439 to Burger anticipates claims 1-3, 5, 6, 14, 20, 24-27, 30, 31, 35, 37, 39-45, 47, and 48, and that US Patent 6,038,315 to Strait, et al. anticipates claims 1, 2, 4, 14, 19-23, 28, 29, 35-44, 46, and 49.

Applicants disagree, since both these conventional techniques must share the biometric data in order to perform a comparison.

First, Burger relies on a reader 12, which is external to the smart card 14 that contains the biometric data, to compare the currently measured biometric scan with the data stored on the card (column 5, line 66 through column 6, line 1). Although there is no external transmission between the reader 12 and a remote location needed in Burger, a subject's biometric privacy is not protected, since the subject's biometric information is transmitted from the smart card 14 to the reader which contains the comparison chip 19, which is described in column 5 at lines 15-16: "*... compares the data and biometric features of the user.*" As the reader 12 in Burger is not protected against even a simple security attack, the subject's biometric information is therefore not protected.

Additionally, since the fingerprint sensor 16 in Burger is incorporated into the reader 12, this biometric data from the sensor 16 is also subject to a security attack.

In contrast, as shown in Figure 1, the present invention includes a device 100 that contains not only the biometric data in non volatile storage 130, but also sensor(s) 110 and processor 120 that performs the comparison. Thus, the device 100 performs a comparison

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without having to share the biometric data stored therein with an external reader, such as used in Burger. That is, the present invention does not allow access to the subject's biometric data.

Hence, turning to the clear language of the claims, there is no teaching or suggestion of “... without any sharing of the subject's biometric data, by accomplishing said authentication without any of said one or plurality of biometric measurements being accessible in any form to any external device or party.”

Therefore, claim 1 is clearly patentable over Burger, and Applicants submit that similar language in the remaining independent claims allows them to similarly be clearly patentable over Burger.

Second, Strait has a similar deficiency. Although the Strait encoding technique might reasonably be considered as providing some protection of the biometrics reference from public access, in particular, a party who does not have access to the secret code word C. However, the system in Strait does have access to C and, therefore, the administrators of that system have access to the biometrics information (e.g., as stated in column 2 at line 45, “... thereby recovering the original biometrics measurement taken ....”). As a result, the subject's biometrics identity is known to the system's administrator. Therefore, the privacy protection in Strait is only against attacks from the outside but offers no privacy protection against internal complicity.

There is no reasonable interpretation that Strait provides the sensor, biometric data storage, and comparator on the same device, as done in the present invention, thereby precluding the sharing of the biometric data (e.g., maintaining inaccessibility of the biometric data).

Therefore, the present invention is clearly patentable over Strait.

For the reasons stated above, the claimed invention is fully patentable over the cited references.

Further, the other prior art of record has been reviewed, but it too, even in combination with Burger and Strait, fails to teach or suggest the claimed invention.

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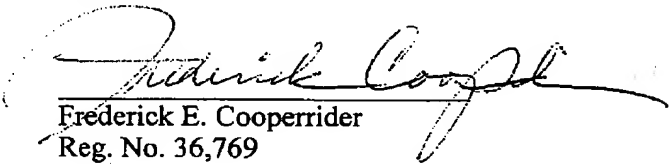
#### IV. FORMAL MATTERS AND CONCLUSION

In view of the foregoing, Applicant submits that claims 1-49, all the claims presently pending in the application, are patentably distinct over the prior art of record and are in condition for allowance. The Examiner is respectfully requested to pass the above application to issue at the earliest possible time.

Should the Examiner find the application to be other than in condition for allowance, the Examiner is requested to contact the undersigned at the local telephone number listed below to discuss any other changes deemed necessary in a telephonic or personal interview. The Commissioner is hereby authorized to charge any deficiency in fees or to credit any overpayment in fees to Assignee's Deposit Account No. 50-0510.

Respectfully Submitted,

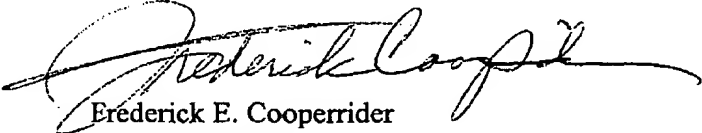
Date: 2/17/04

  
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#### CERTIFICATION OF TRANSMISSION

I certify that I transmitted via facsimile to (703) 872-9306 this Amendment under 37 CFR §1.116 to Examiner M. Smithers on February 17, 2004.

  
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